

METHOD AND APPARATUS FOR PRODUCING  
PSEUDO-CONSTANT BITS PER PICTURE VIDEO  
BIT-STREAMS FOR LOW-DELAY COMPRESSION SYSTEM

Abstract of the Disclosure

5           A frequency domain data management technique for  
producing pseudo-constant bits per picture compressed video  
bit-streams in a low delay digital encoding environment is  
presented. This technique forms a hierarchy among the  
localized samples of the picture in terms of frequency  
10           importance and the picture difficulty after a shot-change is  
detected. After a shot change, the data management technique  
implements a series of tasks composed of picture difficulty  
evaluation, frequency classification, frequency  
15           constraining, and zero bytes generation to achieve a pre-  
determined average picture bits. Further, the low delay  
encoder uses a unique updating mechanism to encode certain  
regions of the pictures in intra mode and ensures that the  
whole picture is updated after a pre-selected number of  
20           pictures. The updating method disseminates compression  
artifacts throughout the video stream by changing the  
orientation of the intra-coded regions for every picture and  
scatters intra-picture compression artifacts by spatially  
decimating the aforementioned regions at different rates.